

January 15, 2003

CERTIFIED MAIL # 9059 0142

Sarwan Singh  
President  
Sam's Gas & Mini Mart II  
5228 Columbia Avenue  
Hammond, Indiana 46320

Re: Registered Operation Status, 089-16290-00261

Dear Mr. Singh:

The application from Sam's Gas & Mini Mart II, received on October 23, 2002 has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following Air Sparging and Soil Vapor Extraction Equipment to be located at 5228 Columbia Avenue, Hammond Indiana, is classified as registered:

Temporary Air Sparging and Soil Vapor Extraction Equipment used to remediate contaminated groundwater and soil. The equipment is capable of discharging 7.2 cubic feet of vapors per day. The emissions are vented through a twelve (12) foot stack.

The following conditions shall be applicable:

326 IAC 2-6 (Emission Reporting)

Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

This registration is a new registration issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality (OAQ) and the Hammond Department of Environmental Management (HDEM) that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section  
Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46206-6015

and

Hammond Department of Environmental  
Management  
Air Pollution Control Division  
5925 Calumet Avenue  
Hammond, Indiana 46320

no later than March 1 of each year, with the annual notice being submitted in the format attached.

Any change or modification which may increase the potential to emit a combination of HAPs to twenty-five (25) tons per year or a single HAP to ten (10) tons per year from this source shall require approval from IDEM, OAQ and HDEM prior to making the change.

An application or notification shall be submitted in accordance with 326 IAC 2 and the Hammond Air Quality Control Ordinance 3522 (as amended) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Ronald Novak, Director  
Hammond Department of Environmental Management

KMM

cc: Permit Administrator – Mindy Hahn  
Permit Tracking - Janet Mobley  
Technical Support and Modeling - Michele Boner  
Compliance Data Section - Karen Ampil

<b>Registration Annual Notification</b>
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This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

<b>Company Name: Sam's Gas &amp; Mini Mart II</b>
<b>Address: 5228 Columbia Avenue</b>
<b>City: Hammond</b>
<b>Authorized Individual: Sarwan Singh</b>
<b>Phone #: (219) 931-7845</b>
<b>Registration #: 089-16290-00261</b>

I hereby certify that Sam's Gas & Mini Mart II is still in operation and is in compliance with the requirements of Registration 089-16290-00261.

<b>Name (typed): Sarwan Singh</b>
<b>Title: President</b>
<b>Signature:</b>
<b>Date:</b>

**Indiana Department of Environmental Management  
Office of Air Quality  
and  
Hammond Department of Environmental Management  
Air Pollution Control Division**

**Technical Support Document (TSD) for a Registered Source**

**Source Background and Description**

**Source Name:** Sam's Gas & Mini Mart II  
**Source Location:** 5228 Columbia Avenue, Hammond, Indiana 46320  
**County:** Lake  
**SIC Code:** 5541  
**Operation Permit No.:** 089-16290-00261  
**Permit Reviewer:** Kristina Massey

The Hammond Department of Environmental Management (HDEM) has reviewed an application from Sam's Gas & Mini Mart II relating to the Registration and local operation permit renewal for the Air Sparging and Soil Vapor Extraction Equipment used to remediate contaminated groundwater at the aforementioned location. Although this is a temporary source that is only scheduled to be in service for an additional six (6) months, it meets the requirements for a Registered Source.

**Permitted Emission Units and Pollution Control Equipment**

The source consists of the following permitted emission units and pollution control devices:

Temporary Air Sparging and Soil Vapor Extraction Equipment used to remediate contaminated groundwater and soil. The equipment is capable of discharging 7.2 cubic feet of vapors per day. The emissions are vented through a twelve (12) foot stack.

**Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

**Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

- (a) OP 01973 (registration No. 089-11537-00261, issued on 1/28/02.

All conditions from previous approvals were incorporated into this permit.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature ( <sup>o</sup> F)
01	Soil Vapor Extraction	12	0.17	150	60

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Commissioner that the Registration renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on October 23, 2002.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations (one (1) page).

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	0
PM-10	0
SO <sub>2</sub>	0
VOC	15.26
CO	0
NO <sub>x</sub>	0

HAP's	Potential To Emit (tons/year)
Benzene	1.61
Toluene	8.83
Ethylbenzene	0.803
Xylene	4.02
TOTAL	15.26

The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOCs are less than or equal to twenty-five (25) tons per year in Lake County. Therefore, the source is not subject to the provisions of 326 IAC 2-7. However the potential to emit is greater than ten (10) tons per year of VOCs so the source is subject to 326 IAC 2-5.1-2, State Registrations.

### Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2001 data.

Pollutant	Actual Emissions (tons/year)
PM	0
PM-10	0
SO <sub>2</sub>	0
VOC	0.025
CO	0
NO <sub>x</sub>	0
HAP (specify)	0.025

### County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	Moderate Nonattainment
SO <sub>2</sub>	Primary Nonattainment
NO <sub>2</sub>	Attainment/Unclassifiable
Ozone	Severe Nonattainment
CO	Attainment
Lead	Attainment/Unclassifiable

Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as nonattainment for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

### Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0
PM10	0
SO <sub>2</sub>	0
VOC	15.26
CO	0
NO <sub>x</sub>	0

This existing source is **not** a major stationary source because Volatile Organic Compounds (VOC) are not emitted in Lake County at a rate of 25 tons per year or greater. Also, the source does not emit greater than ten (10) tons of a single Hazardous Air Pollutant (HAP) or greater twenty-five (25) tons of combined HAPs. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the HDEM.

#### **Federal Rule Applicability**

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

#### **State Rule Applicability - Entire Source**

##### **326 IAC 2-6 (Emission Reporting)**

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons of VOC in Lake County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

##### **326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)**

Pursuant to 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants), any owner or operator or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP) as defined in 40 CFR 63.41 must comply with this rule. This rule does not apply because, this source is **not** a major source since it emits less than twenty-five (25) tons per year of any combination of HAPs, and less than ten (10) tons of a single HAP.

##### **326 IAC 8-1-6 (New Facilities; General Reduction Requirement)**

Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirement), new facilities which have potential emissions of twenty-five (25) tons or more per year, located anywhere in the state, which are not otherwise regulated by other provisions of this article (326 IAC 8), shall reduce VOC emissions using best available control technology (BACT). This rule does not apply because, this source is **not** a major source since it emits less than twenty-five (25) tons per year of VOCs.

#### **Conclusion**

The operation of this Air Sparging and Soil Vapor Extraction shall be subject to the conditions of the attached Registration.

## Sam's Gas & Mini Mart II Remediation Calculations (2002)

<b>Discharge per day</b> = 150 cu. Ft./min * 60 min/hr * 8 hr/day =	72,000	cu. Ft./day
<b>Discharge vapor concentration</b> =	65	parts per million
<b>Discharge of vapors per day</b> = 72,000 cu. Ft./day * 65 ppm =	4.68	cu. Ft. of vapors/day
<b>Volume of vapors discharged per day</b> = 4.7 cu. Ft./day * 7.49 gal/cu. Ft. =	35.203	gallons/day
<b>Lbs of Benzene Discharged/day</b> = 35.2 gal/day * 6.25 lbs/gal * 4% =	8.80	lbs/day
	0.367	lbs/hr
	1.61	TPY
<b>Lbs of Toluene Discharged/day</b> = 35.2 gal/day * 6.25 lbs/gal * 22% =	48.4	lbs/day
	2.02	lbs/hr
	8.83	TPY
<b>Lbs of Ethylbenzene Discharged/day</b> = 35.2 gal/day * 6.25 lbs/gal * 2% =	4.4	lbs/day
	0.183	lbs/hr
	0.803	TPY
<b>Lbs of Xylene Discharged/day</b> = 35.2 gal/day * 6.25 lbs/day * 10% =	22	lbs/day
	0.917	lbs/hr
	4.02	TPY
<b>Total lbs of Contaminants (BTEX) Discharged/day=</b>	<b>83.6</b>	<b>lbs/day</b>
	<b>3.483</b>	<b>lbs/hr</b>
	<b>15.257</b>	<b>TPY</b>

\*\* Calculations based on company submittal which includes gasoline contaminant percentages from Amoco